

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 April 2004 (15.04.2004)

PCT

(10) International Publication Number
WO 2004/032287 A1

(51) International Patent Classification⁷: **H01R 13/629**

(74) Agents: CALDWELL, Stacey, E. et al.; Molex Incorporated, 2222 Wellington Court, Lisle, IL 60532 (US).

(21) International Application Number:

PCT/US2003/030535

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:

26 September 2003 (26.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

290655/2002

3 October 2002 (03.10.2002) JP

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **MOLEX INCORPORATED** [US/US]; 2222 Wellington Court, Lisle, IL 60532 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **MATSUMOTO, Yasuyoshi** [JP/JP]; Heights-Ichikawa-Daisan #305, 12-19 Chuo, 6-Chome, Yamato-shi, Kanagawa 242-0021 (JP). **TOMITA, Mitsuhiro** [JP/JP]; 6-5-719 Nishi-tsuruma, 3-chome, Yamato-shi, Kanagawa 242-0005 (JP).

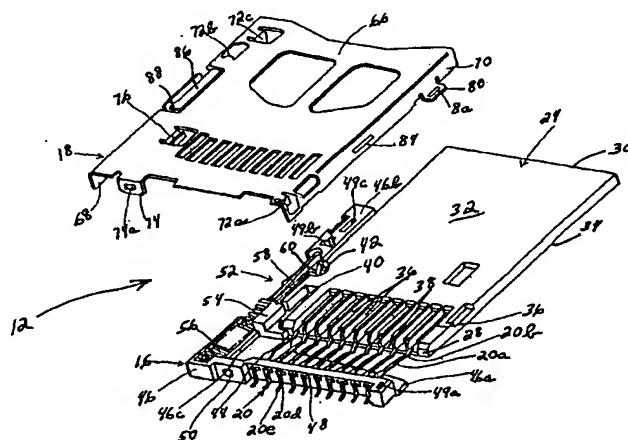
Published:

- with international search report
- with amended claims

Date of publication of the amended claims: 21 May 2004

[Continued on next page]

(54) Title: MEMORY CARD CONNECTOR



(57) Abstract: A memory card connector includes a front receptacle area communicating with an interior cavity for receiving a memory card. The connector has an L-shaped insulating housing which includes a rear terminal-mounting section extending transversely across a rear of the cavity, and a longitudinal side wall section extending forwardly of one end of the rear section defining one side of the cavity. A plurality of terminals are mounted in a side-by-side array along the rear terminal-mounting section of the housing and have contact portions at a rear of the cavity for engaging contacts on the memory card. A metal shell covers at least a portion of the insulating housing and includes a cover plate defining a top of the cavity and a longitudinal side wall plate depending from the cover plate and defining a side of the cavity opposite said side defined by the longitudinal side wall section of the housing.

WO 2004/032287 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

AMENDED CLAIMS

[Received by the International Bureau on 26 March 2004 (26.03.04):
original claims 1-16 replaced by amended claims 1-9; (2 pages)]

1. A memory card connector (12) having a front receptacle area (26) communicating with an interior cavity (22) for receiving a memory card (24), comprising:
an L-shaped insulating housing (16) having a rear terminal-mounting section (44) extending transversely across a rear of the cavity, and a longitudinal side wall section (46) extending forwardly of one end of the rear section defining one side of the cavity;
a plurality of terminals (20) mounted in a side-by-side array along the rear terminal-mounting section (44) of the housing and having contact portions (20b) at a rear of the cavity for engaging contacts (38) on the memory card;
a metal shell (18) covering at least a portion of the insulating housing (16) and including a cover plate (66) defining a top of the cavity (22) and a longitudinal side wall plate (70) depending from the cover plate and defining a side of the cavity opposite said side defined by the longitudinal side wall section (46) of the housing; and
complementary interengaging snap-latch members (50,74) on the housing (16) and the metal shell (18) to snappingly mount the shell to the housing.

2. The memory card connector of claim 1 wherein the cover plate (66) of said metal shell (18) is of a sufficient size to cover substantially the entire area of said insulating housing (16).

3. The memory card connector of claim 1 wherein said metal shell (18) includes a second longitudinal side wall plate (68) depending from the cover plate (66) and overlying the longitudinal side wall section (46) of the housing (16).

4. The memory card connector of claim 1 wherein said side wall plate (70) of the metal shell (18) includes at least one mounting tab (80) bent outwardly at the bottom of the plate for mounting the connector on a circuit board.

2 5. The memory card connector of claim 1 wherein said side wall plate (70) of the
metal shell (18) includes a longitudinal bottom flange (82) bent inwardly at a bottom edge of the
plate for guiding the memory card (24) into and out of said cavity (22).

2 6. The memory card connector of claim 1 wherein said side wall plate (70) of the
metal shell (18) includes a slide projection (84) extending into the cavity (22) for engaging a side
edge of the memory card (24) to reduce friction with the card as the card moves into and out of
4 said cavity.

2 7. The memory card connector of claim 6 wherein said slide projection comprises
a narrow boss (84) elongated in the direction of movement of the memory card (24).

2 8. The memory card connector of claim 1 wherein said metal shell (18) is
stamped and formed of sheet metal material.

4 9. The memory card connector of claim 1, including a card ejection mechanism
(52) on the longitudinal side wall section (44) of the housing.